



Product fulfillment

Supply rationalization

To reach peace of mind

Maintenance decrease

Energy saving

Design optimization

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SKF Power Transmission products



Linking power transmission products to the supply chain



Linking power transmission products to the supply chain



Power transmission products play an important role in overall bearing performance. They are the vital link between moving parts in equipment, and industry as a whole spends about twice as much on these products as it does on the actual bearings.

By creating its own range of power transmission products, SKF can offer well-matched products that give engineers a wide design choice considering performance and cost.

SKF is the first bearing manufacturer to consolidate the sales and supply of power transmission products in this way. The product range, sold under the Group's existing brand, is the result of a thorough analysis of the market and customer requirements.

Bringing power transmission products under a single brand offers significant user benefits as well as the confidence

that comes from a well-known brand. SKF can provide a convenient single supply source for products and services with a large stock of products. This, in turn, offers the chance to simplify logistics to end users and reduce administrative work.

SKF already has its own sophisticated worldwide warehousing and logistics systems through which power transmission products are supplied. This currently can provide easy access to about 30 000 power transmission products which enables distributors and end customers to have smaller stocks and less capital invested in inventory.

As bearings and other power transmission components work together in many industries, many bearing problems and failures can be identified through SKF's knowledge of power transmission. A few examples

of those industries are food and beverage, oil and gas, pulp and paper, textile, metalworking, packaging, mining, mineral processing and cement, agriculture and material handling. Combining an understanding of bearing systems with power transmission gives SKF the opportunity to enhance the support it gives to users.

The SKF Power transmission range covers most common types of products, which can be divided into six main categories – belts, pulleys, chains, sprockets, couplings, as well as bushings and hubs. All SKF Power transmission products are identified by an SKF specific designation prefix. Apart from that, the designation follows international standards for easy recognition and cross-referencing.

Why are power transmission products from SKF so unique?

Product fulfillment

To complement our well-known, high quality line of bearings, SKF extended its range of solutions to fulfill your rotating equipment needs.

Supply rationalization

A major part of your transmission needs can today be sourced from one place: less inventory and maintenance costs, more speed and focus on critical issues.

To reach peace of mind

An extensive range of products is available, well identified, well packed, traceable and accessible via your SKF Authorized Distributor whenever you need it.

Reduced maintenance

By using SKF Power transmission and SKF Maintenance Products together, you can mount, lubricate, align and maintain your application more efficiently.

Energy saving

SKF's strong focus on sustainability is also reflected in this product line. Let SKF help you to reduce your energy consumption.

Design optimization

A unique set of calculation tools provides you with the most efficient and economical solution for your belt or chain drive.

No matter in which industry you operate, SKF has the right solution for your power transmission needs



Industry coverage

- Food and beverage
- Oil and gas
- Pulp and paper
- Textile
- Metalworking
- Packaging
- Mining, mineral processing and cement
- Agriculture
- Material handling
- And many others

Pulp and paper

Example 1

Areas of use:

- Wood yard
- Pulp preparation
- Packaging

Main applications:

- Conveyor drives
- Agitators
- Pumps



Mining, mineral processing and cement

Example 2

Areas of use:

- Mining
- Mineral processing
- Cement production

Main applications:

- Screens
- Crushers
- Conveyors
- Fans
- Pumps and compressors
- Mobile equipment



Food and beverage

Example 3

Areas of use:

- Beverages
- Meat and poultry
- Sugar
- Pet food
- Dairy
- Palm oil

Main applications:

- Conveyors
- Fans
- Freezers
- Packaging lines
- Clarifiers and separators
- Dryers



Metalworking

Example 4

Areas of use:

- Steelmaking
- Continuous casting
- Rolling

Main applications:

- Smelting
- Milling
- Handling of finished goods



Product fulfillment

By developing its own range of solutions for power transmission, SKF is able to offer well matched products thus giving engineers a wide choice for better performance at an optimum cost level.



Belts

- Oil and heat resistance/anti-static properties (except SKF Cogged Raw Edge Belts).
- Globally sourced rubber along with stringently controlled tension members provide the superior performance expected from SKF.
- State-of-the-art electronic rubber blending/mixing processes maintain superior quality.
- Tight tolerance stability during the manufacturing process along with superior raw material eliminates the requirement to match individual belts to a single drive.



Pulleys

- Pulleys are all statically balanced to provide true running tolerances at higher speeds.
- Dynamic balancing is also available on request.
- Pulleys, with an outside diameter less or equal to 300 mm are boxed. Pulleys with an outside diameter greater than 300 mm or over 30 kg are on a wooden pallet.

I had an application involving an elevator with cups for transporting caustic soda. SKF proposed to us that we upgrade the drive with chains made of a special stainless steel, which is more suitable for a very high corrosive environment. SKF has shown that it has capabilities even in transmission!

Oltchim SA, Rm. Valcea, Romania



Chains

- From the raw material to the finished product, our chains superior by design: 100 % pre-stressing, 100 % pre-loading and running prior to packaging.
- SKF uses a heavy pre-lubrication process to enable optimum storage life; All SKF Chains are fully wrapped in plastic prior to being boxed.



Couplings

- SKF Flex, Jaw, Chain, Gear, Grid FRC, Rigid Couplings, and Universal Joints: no matter which coupling your application requires, SKF offers options for bushings, bored to size or simply piloted.
- All couplings are boxed or bagged for protection; larger units are on a wooden pallet for easy handling and safety.

Dacrotized	Suitable for corrosive conditions.
Nickel-plated	Improved wear resistance. Recommended for outdoor conditions, such as exposure to rain.
Zinc-plated	A cost-effective way to increase corrosion resistance.
Stainless steel	Used in food processing applications, high/low temperature conditions (-20 to 400 °C/ -4 to 752 °F) and in corrosive environments.



Sprockets

- All sprockets are oiled, bagged, sealed and then boxed. This allows the product to reach the customer in perfect condition every time.
- Sprockets are also available with hardened teeth, bored and keyed to size.
- Sprockets, with an outside diameter less or equal to 300 mm are boxed. Sprockets with an outside diameter greater than 300 mm or over 30 kg are on a wooden pallet.



Bushings

- Bushings are available in many variants: Taper bushings, QD bushings, FX Keyless bushings, weld-on hubs and bolt-on hubs. They are made from high quality steel and most types are phosphate coated or blackened for improved corrosion resistance.
- All bushings are designed for quick and easy installation and removal with basic tools, resulting in minimum downtime each time they are fitted.

SKF is the only company that has offered us, besides bearings, a full range of power transmission products, and we, of course, trust them in that business too.

IFAMAC, Valencia, Spain

- The wide range of available metric and imperial bore sizes of taper and QD bushings provide off-the-shelf availability and eliminates the need for additional machining.
- SKF FX Keyless Bushings offer a true concentric, tight fit without showing problems associated with keyways. Zero backlash installation, cylindrical (non-tapered) bore and plain shafting are only a few of the advantages of these bushings.

Supply rationalization



Through an SKF Authorized Distributor, “one-stop shopping” is a reality.

With a complete range of power transmission components, you are able to reduce transactional and other related logistics expenses. Good quality products can also improve the performance of your rotating equipment and decrease your maintenance costs. With the right product, at the right place and at the right time, SKF enables you to focus on what really matters to your core business.



Timing belts



Bushings



Chains



Sprockets



Couplings and U-joints



V and wedge belts




















Special belts



Pulleys



Smart tools

	 	Specialized transmission reseller	General transmission house
Product range	<ul style="list-style-type: none"> • Power transmission • Bearings • Seals • Lubrication • Mounting tools • Maintenance services 	<ul style="list-style-type: none"> • Belts and/or • Pulleys and/or • Chains and/or • Sprockets and/or • Couplings and/or • Locking elements 	<ul style="list-style-type: none"> • Power transmission components of different quality levels
Quality level Using high quality components, the performance of your machinery will be maximized			
Ordering time The fewer sources you quote for price and delivery, the less time consuming the order placement will be			
Delivery time The more simplified and integrated your supply chain is, the sooner you will get the products you need			
Operational costs Better product availability and faster replacement means less inventory and more savings to your budget			
Maintenance costs By maintaining and re-designing your equipment with the right tools, your maintenance costs will drop			

We are always looking for partners who are able to decrease our total costs. By ordering a full package of power transmission products from SKF, we have moved another step forward. The upgrade we made with SKF Belts, Pulleys, Chains and Sprockets resulted in a significant increase in performance and helped us to increase our profitability.

Mikrosan Makine, Istanbul, Turkey

To reach peace of mind

Step 1: Identify

Don't waste any time searching for products. Find what you are looking for in a matter of seconds.

Our comprehensive online catalogue (also available in a printed version) is translated into more than 20 languages and contains about 30 000 different products. Through a user friendly search engine, you will be able to find the parts you need, even if you don't have a part number. Technical data and drawings will guide your choice.



We have found that SKF's online PT catalogue is a fantastic resource. Having all the product information in one place for the first time, in an easy-to-use format, has had real tangible benefits for our personnel.

AFC Ltd., Bristol, United Kingdom

Step 2: Order

The world's most efficient bearing supply chain is also meeting your needs for power transmission products.

And your SKF Authorized Distributor is the most important link to it.

Quick access to the products you need is a critical factor in reducing downtime. Supported by the advanced logistics of the SKF supply chain, your SKF Authorized Distributor has the systems in place to deliver on time, everytime. Thanks to unique e-business portals, collaborative logistics, inventory management, programs and a transportation network that functions with astounding efficiency, the product you need for your drive unit is typically waiting for you on your distributor's shelf. And if it's not, your SKF Authorized Distributor can get it quickly by tapping into a global SKF inventory capable of one of the fastest deliveries in the transmission business.



SKF European Distribution Centre – Europe's #1 ranked bearing distribution network

- Extraordinary high customer satisfaction rating in the bearing industry
- More than 30 000 power transmission products are available with approximately 9 000 normally in stock
- Very high order accuracy
- 3 shifts, 365 days a year service, with more than 1 000 order lines on average shipped per hour

Advanced e-business portals enable around-the-clock ordering and tracking

SKF's European Distribution Centre is linked directly to SKF Authorized Distributors via Electronic Data Interchange (EDI) and other e-business portals including endorsia.com, the world's largest bearing marketplace. This advanced e-commerce tool enables your SKF distributor to execute online order transactions and inquiries on price, availability and order status – 24 hours a day, 7 days a week.

Step 3: Replace

The old days of inconsistency and lack of information are gone.

A considerable amount of the power transmission components traded at present in the industry come without a part number or an identification of the source. Looking at the end users' needs, SKF steps up as the leader in classification, marking, packaging and traceability of those products, including pulleys, sprockets and bushings.



Most of the products are wrapped in plastic bags and inserted in carton boxes which protect them from undesired environmental damage (not applicable to belts).



Each power transmission product is branded SKF and well marked with a part number. That allows you to make a smoother replacement and also to easily identify the source of the component.

I was having difficulties in finding a supplier for a non-standard type of chain. My need was fulfilled as soon as I called an SKF Authorized Distributor and found out they had it available for immediate delivery.

Multiserv, Châtelet, Belgium

Reduced maintenance

SKF Power transmission and SKF Maintenance Products together help you mount, lubricate, align and maintain your application more efficiently.



Belt drives

SKF supplies both the belts and pulleys to precise matching angles so that your drive will last longer and operate with maximum efficiency. High strength cords and premium quality rubber mean SKF Belts will keep machinery running longer without retensioning the belts.

Couplings

With the correct selection from the SKF range of specialised couplings, many hours of unnecessary downtime can be saved by not having to move surrounding equipment to install / replace the couplings or check for wear. SKF Couplings also help protect machinery by absorbing shock loads and dampening vibration.

Chain drives

By using high quality steel and paying careful attention to the smallest details in the manufacturing process, SKF Chains are built for endurance. Specialized chains, such as the Dacrotized chain, enables longer service life even in the most corrosive environments.

We had severe problems with four critical pumps and due to the use of low quality couplings and bad alignment, we were forced to replace all of them in one year. SKF came in and performed vibration measurements and offered its Flex coupling solution. I'm happy with SKF's intervention.

Alpha Wood, Greneva, Greece

Belt-driven machinery downtime caused by misalignment is a problem of the past

The SKF Belt Alignment Tool, TMEB 2, aligns the pulleys where it counts most – in the grooves. V-guides and powerful magnets allow the TMEB 2 to be fitted in the grooves of the pulley. With only two components, a laser-emitting unit and a receiver unit, the TMEB 2 is easy and fast to attach. The three-dimensional target area on the receiver identifies horizontal, vertical, parallel or combined misalignment quickly and easily.

- Aligns grooves of the pulley rather than its face, allowing the alignment of pulleys of unequal width or with dissimilar faces – even fits applications where the pulley face cannot be used as a reference.
- No trial and error. The laser position indicates the nature of misalignment allowing easy and accurate adjustment.



Pinpoint accurate alignment simply achieved

The SKF Shaft Alignment Tools, TKSA series, offer you simplicity with a high degree of accuracy.

Measuring, aligning and documenting

These highly innovative tools feature a three-step process for correcting alignment. First, measure the machinery's current alignment status. Then, align the machine vertically and horizontally. Finally, document and keep track of the alignment activities. These three simple steps allow you to easily and effectively align shafts using advanced laser technology.

Features

- Easy-to-use, three-step process: measure-align-document
- Compact, lightweight design
- Spirit levels allow easy and fast positioning of the measuring units
- Measurements in millimetres or inches facilitate worldwide use
- Supplied in sturdy, lightweight carrying cases for portability



Extend your chain life with SKF oils

SKF chain oils come in three convenient sizes to suit the needs of most chain applications in industrial environments. The chain oils – medium temperature, high temperature and food compatible (NSF H1) – are available in 400 ml (13,52 oz.) aerosol cans, 5 liter (1,32 gallon) cans, and as an oil fill for SYSTEM 24® single point automatic lubricators.



Energy saving

Let SKF help you to reduce your energy consumption.

By their very nature, bearings make a positive contribution to the natural environment, enabling machinery to operate more efficiently, consume less power, and require less lubrication. By raising the performance bar for our own products, SKF is enabling a new generation of high-efficiency products and equipment, which includes power transmission components.

Have a look at this success story which is a result of an SKF contribution to a customer in Argentina.

Industry: Pulp & paper
Application: Roof fans

Situation before SKF intervention:

- Low performance and reliability of roof fans which were critical to the production process
- Extra cost and downtime because of belts and bearing failures
- Improper maintenance procedures

Overall analysis:

- Type of failure detected: bearing damage
- Main cause: high tension of belts
- Others: The pulley diameter in the motor was below the minimum diameter required for the type of belts installed; the pulleys were also misaligned

Actions:

- Recalculate the drive
- Create guidelines for mounting and tensioning belts
- Introduce SKF tools into the maintenance process to maintain proper belt tension and pulley alignment

Results after SKF intervention:

- Improved fan reliability
- Improved process reliability
- 6 % energy savings

Industry: Forestry
Application: Draft fans

Situation before SKF intervention:

- High energy consumption
- Low belt drive performance

Overall analysis:

- Pulleys worn and misaligned

Actions:

- New belts mounted
- Introduced SKF tools into the maintenance process to maintain proper belt tension and pulley alignment
- Measured energy consumption

Results after SKF intervention:

- Reduced energy consumption by 3 % (average)
- Improved fan reliability

Fan type	Initial electric current (A)	Final electric current (A)	Initial tension (V)	Final tension (V)	Saving
A (208 HP)	239,5	233,0	402,4	400,8	3,1 %
B (300 HP)	261,4	252,0	402,1	400,8	3,9 %
C (268 HP)	258,2	254,7	400,9	401,1	1,3 %

This is another reference case taken from a customer in Chile which was an early adopter of the SKF Power transmission solution.



Design optimization

SKF offers its customers online calculation tools for both belt and chain drive designs.

Using your data, the program will select the most efficient and economical solution for your application. At the end of your calculation, you are able to print and save a complete report for your documentation. The calculation tools can be found at www.skfptp.com.

To start off you need to pick your preferred language and click on the calculation tool of your choice. See examples on the following pages.



Belt drives



Choose multiple or single solution calculations to start the program. The calculation based on single solutions is mainly used to check existing belt drives. For multiple solutions, you can either select belts by yourself or the program will give you a list of possible belt types.

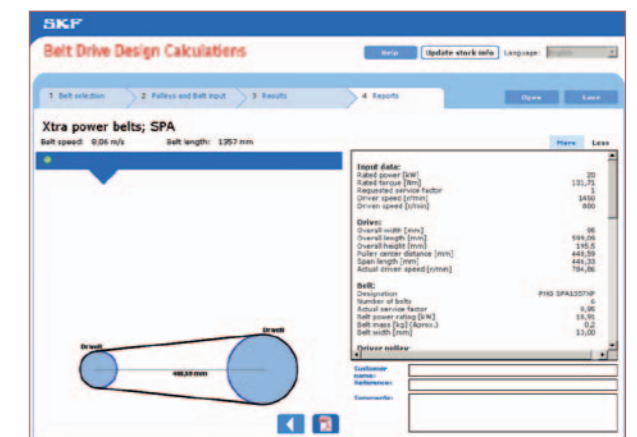


Fill in basic application data, such as:

- Power and drive conditions
- Speeds and maximum pulley diameters
- Shaft diameters (if known)
- Center distance



Based on your input, the system will provide a list of recommended solutions for your application.



The program will provide a full report about your selection that you can print and save as documentation.

Design optimization

Chain drives

Add your company data (optional)

Fill in the basic data of your application

Press "Automatic Design"

The system will show you a list of possible solutions for your drive which can be ranked by weight or price index

The solution of your choice will be prompted in this area; if not satisfied, you can go back and choose an alternative

Parameter	Value	Recommended Range
2.1 Chain selection - Standard chain No. (Pitch)	10B-3 (15.875)	
2.2 Chain pitch / chains strands number	t 15.875 3	
2.3 Sprocket - number of teeth / recommended	z 15 31 21 (min = 12)	
2.4 Pitch diameter	Dp 76.355 156.917 [mm]	
2.5 Desired axis distance / recommended	C 641.66 835 [mm]	
2.6 Actual axis distance / min.-max.	C 641.66 163 - 2540 [mm]	
2.7 Number of chain links	X 104 104	
2.8 Length of the chain	L 1651.00 [mm]	
2.9 Speed of the chain / max	v 5.60 < 12.80 [m/s]	
2.10 Design power / table power	Pp 14.00 < 22.10 [kW]	
2.11 Tensile force / Centrifugal force	Fu/Fc 1785.7 86.9 [N]	
2.12 Breaking force (table) / Force on the chain	FB/Fr 66700.0 1872.6 [N]	
2.13 Static coefficient of safety against breakage	SB 35.62 > 18.3	
2.14 Dynamic coefficient of safety against breakage	SD 25.44 > 15.78	
2.15 The calculated / permitted pressure in the chain joint	p 9.27 < 9.47 [MPa]	
2.16 Level of safety of the chain joint	SP 1.02 > 1.00	
2.17 Total weight of the transmission / chain	m 10.26 4.57 [kg]	

Parameter	Value	Unit
3.1 Coefficients for power corrections		
3.2 Coefficient of the number of teeth	K1 1.00 1.30	
3.3 Coefficient of the transmission ratio	K2 1.00 1.09	
3.4 Coefficient of shock (Service factor)	K3 1.40 1.40	
3.5 Coefficient of distances of axes	K4 1.00 1.00	
3.6 Coefficient of lubrication	K5 1.00 1.50	
3.7 Coefficient of temperature	K6 1.00 1.00	
3.8 Coefficient of service life	K7 1.00 1.00	
3.9 Calculation and setting of coefficients according to	ASME B29.1M	
3.10 Recommended type of lubrication	Oil pressure circulation lubrication	
3.11 Type of lubrication (permissible)	Oil dip with splash ring	
3.12 Maximum slackness of the chain	y 12.83 [mm]	
3.13 Minimum / Maximum speed of sprocket 2	5.48 5.63 [m/s]	
3.14 Coefficient of speed variation	ε 2.70 [%]	
4.0 Dimensions		
d1	5.080 [mm]	
d3	10.160 [mm]	
b1	9.650 [mm]	
b2	13.050 [mm]	
t	15.875 [mm]	
q	14.700 [mm]	
l	52.700 [mm]	
e	16.590 [mm]	
s1	1.700 [mm]	
s2	1.700 [mm]	
Da	83.737 164.299 [mm]	
Dp	76.355 156.917 [mm]	
Df	65.945 146.507 [mm]	
R1	5.205 [mm]	
R2	26.822 66.487 [mm]	
α	124.000 127.097 [°]	
bf	8.975 [mm]	
ba	1.270 [mm]	
rx	7.620 [mm]	
f	11.113 [mm]	
Dg	54.129 134.691 [mm]	

More specific details will be displayed in this area

Thanks to the on-line calculation tools offered through the SKF website, we are able to optimize the power transmission elements mounted in our machines. Those tools are very useful and easy to use.

Talleres Serrano, Castellón, Spain